

1531

Sib1

09/424951

GAGATTAGAACCATTGAATGGGATTATTGGWATGACYCAGTTGTCRCTTGATACAGAG 1590
GluIleArgThrProLeuAsnGlyIleIleGlyMetThrGlnLeuSerLeuAspThrGlu 530
H1
 TTGACRCAGTACCAACGAGAGATGTTGTCGATTGTGCATAACTTGGCAAATTCCTTGTTG 1650
 LeuThrGlnTyrGlnArgGluMetLeuSerIleValHisAsnLeuAlaAsnSerLeuLeu 550
 ACCATTATAGACGATATATTGGATATTTCTAAGATTGAGGCGAATAGAATGACGGTGGAA 1710
 ThrIleIleAspAspIleLeuAspIleSerLysIleGluAlaAsnArgMetThrValGlu 570
 CAGATTGATTTTTTCATTAAGAGGGACAGTGTTTGGTGCATTGAAAACGTTAGCCGTCAA 1770
 GlnIleAspPheSerLeuArgGlyThrValPheGlyAlaLeuLysThrLeuAlaValLys 590
 GCTATTGAAAAAACCTAGACTTGACCTATCAATGTGATTCATCGTTTCCAGATAATCTT 1830
 AlaIleGluLysAsnLeuAspLeuThrTyrGlnCysAspSerSerPheProAspAsnLeu 610
 ATTGGAGATAGTTTTAGATTACGACAAGTTATTCTTAAGTTGGCTGGTAATGCTATTAAG 1890
 IleGlyAspSerPheArgLeuArgGlnValIleLeuAsnLeuAlaGlyAsnAlaIleLys 630
N
 TTTACTAAAGAGGGGAAAGTTAGTGTTAGTGTTGAAAAAGTCTGATAAAATGGTGTTAGAT 1950
 PheThrLysGluGlyLysValSerValSerValLysLysSerAspLysMetValLeuAsp 650
 AGTAAGTTGTTGTTAGAGGTTTGTGTTAGCGACACGGGAATAGGTATAGAGAAAGACAAA 2010
 SerLysLeuLeuLeuGluValCysValSerAspThrGlyIleGlyIleGluLysAspLys 670
G1
 TTGGGATTGATTTTCGATACCTTCTGTCAAGCTGATGGTTCTACTACAAGAAAGTTTGGT 2070
 LeuGlyLeuIlePheAspThrPheCysGlnAlaAspGlySerThrThrArgLysPheGly 690
Sib2
 GGTACAGGTTTAGGGTTGTCAATTTCCAAACAGTTGATACATTTAATGGGTGGAGAGATA 2130
GlyThrGlyLeuGlyLeuSerIleSerLysGlnLeuIleHisLeuMetGlyGlyGluIle 710
G2
 TGGGTACTTTCGGAGTATGGATCCGGRTCAAACCTTTTATTTTACGGTGTGCGTGTGCCA 2190
 TrpValThrSerGluTyrGlySerGlySerAsnPheTyrPheThrValCysValSerPro 730
 TCTAATATTAGATATACTCGACAAACCGAACAATTGTTACCATTTAGTTCCCATTATGTG 2250
 SerAsnIleArgTyrThrArgGlnThrGluGlnLeuLeuProPheSerSerHisTyrVal 750
 TTATTTGTATCGACTGAGCATACTCAAGAAGAACTTGATGTGTTGAGAGATGGAATTATA 2310
 LeuPheValSerThrGluHisThrGlnGluGluLeuAspValLeuArgAspGlyIleIle 770
 GAACTTGGATTGATACCTATAATAGTGAGAAATATTGAAGATGCAACATTGACTGAGCCG 2370
 GluLeuGlyLeuIleProIleIleValArgAsnIleGluAspAlaThrLeuThrGluPro 790
 GTGAAATATGATATAATTATGATTGATTCGATAGAGATTGCCAAAAAGTTGAGGTTGTTA 2430
 ValLysTyrAspIleIleMetIleAspSerIleGluIleAlaLysLysLeuArgLeuLeu 810
 TCGGAGGTTAAATATATTCCGTTGGTTTTGGTCCATCATTCTATTCCACAGTTGAATATG 2490
 SerGluValLysTyrIleProLeuValLeuValHisHisSerIleProGlnLeuAsnMet 830
 AGAGTATGTATTGATTTGGGGATATCTTCCTATGCAAATACGCCATGTTTCGATCACGGAC 2550
 ArgValCysIleAspLeuGlyIleSerSerTyrAlaAsnThrProCysSerIleThrAsp 850
 TTGGCCAGTGCATTATACCAGCGTTGGAGTCGAGATCTATATCACAGAACTCAGACGAG 2610
 LeuAlaSerAlaIleIleProAlaLeuGluSerArgSerIleSerGlnAsnSerAspGlu 870
 TCGGTGAGGTACAAAATATTACTAGCAGAGGACAACCTCGTCAATCAGAACTTGCAAGTT 2670
 SerValArgTyrLysIleLeuLeuAlaGluAspAsnLeuValAsnGlnLysLeuAlaVal 890

Fig. 1a

09/424951

AGGATATTAGAAAAGCAAGGGCATCTGGTGAAGTAGTTGAGAACGGACTCGAGGCGTAC 2730
ArgIleLeuGluLysGlnGlyHisLeuValGluValValGluAsnGlyLeuGluAlaTyr 910
GAAGCGATTAAGAGGAATAAATATGATGTGGTGTGATGGATGTGCAAATGCCT 2784
GluAlaIleLysArgAsnLysTyrAspValValLeuMetAspValGlnMetPro 928

← Sib3

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Fig. 1b

ATGAACCCCACTAAAAACCTCGGTTATCACCAATGCAGCCCTCTGTTTTTGAATACTC 60
 MetAsnProThrLysLysProArgLeuSerProMetGlnProSerValPheGluIleLeu 20
 AACGACCCTGAGCTTTATAGTCAGCACTGTCATAGCCTTAGGGAAACACTTCTTGATCAT 120
 AsnAspProGluLeuTyrSerGlnHisCysHisSerLeuArgGluThrLeuLeuAspHis 40
 TTCAACCATCAAGCTACACTTATCGACACTTATGAACATGAACTAGAAAAATCCAAAAAT 180
 PheAsnHisGlnAlaThrLeuIleAspThrTyrGluHisGluLeuGluLysSerLysAsn 60
 GCCAACAAAGCGTCCCAACAAGCACTTAGTGAAATAGGTACAGTTGTTATATCTGTTGCC 240
 AlaAsnLysAlaSerGlnGlnAlaLeuSerGluIleGlyThrValValIleSerValAla 80
 ATGGGAGACTTGTGCGAAAAAGTTGAGATTACACACAGTAGAAAATGACCCTGAGATTTTA 300
 MetGlyAspLeuSerLysLysValGluIleHisThrValGluAsnAspProGluIleLeu 100
 AAAGTCAAAATCACCATCAACACCATGATGGATCAATTACAGACATTTGCTAATGAGGTT 360
 LysValLysIleThrIleAsnThrMetMetAspGlnLeuGlnThrPheAlaAsnGluVal 120
 ACAAAGTCGCCACCGAAGTCGCAAATGGTGAAGTGGTGGACAAGCGAAAAATGATGGA 420
 ThrLysValAlaThrGluValAlaAsnGlyGluLeuGlyGlyGlnAlaLysAsnAspGly 140
 TCTGTTGGTATTTGGAGATCACTTACAGACAATGTTAATATTATGGCTCTTAATTTAACT 480
 SerValGlyIleTrpArgSerLeuThrAspAsnValAsnIleMetAlaLeuAsnLeuThr 160
 AACCAAGTGCGAGAAATTGCTGATGTCACACGTGCTGTTGCCAAGGGGGACTTGTCACGT 540
 AsnGlnValArgGluIleAlaAspValThrArgAlaValAlaLysGlyAspLeuSerArg 180
 AAAATTAATGTACACGCCCAGGGTGAAATCCTTCAACTCAACGTACAATAAACACCATG 600
 LysIleAsnValHisAlaGlnGlyGluIleLeuGlnLeuGlnArgThrIleAsnThrMet 200
 GTGGATCAGTTACGAACGTTTGCATTCGAAGTATCTAAAGTTGCTAGAGATGTTGGTGTG 660
 ValAspGlnLeuArgThrPheAlaPheGluValSerLysValAlaArgAspValGlyVal 220
 CTTGGTATATTAGGAGGACAAGCGTTGATTGAAAATGTTGAAGGTATTTGGGAAGAGTTG 720
 LeuGlyIleLeuGlyGlyGlnAlaLeuIleGluAsnValGluGlyIleTrpGluGluLeu 240
 ACTGATAATGTCAATGCCATGGCTCTTAATTTGACTACACAAGTGAGAAATATTGCCAAT 780
 ThrAspAsnValAsnAlaMetAlaLeuAsnLeuThrThrGlnValArgAsnIleAlaAsn 260
 GTCACCACTGCCGTTGCCAAGGGGGATTGTCGAAAAAAGTCACTGCTGATTGTAAGGGA 840
 ValThrThrAlaValAlaLysGlyAspLeuSerLysLysValThrAlaAspCysLysGly 280
 GAAATYCTTGATTTGAACTTACTATTAATCAAATGGTGGACCGATTACAGAATTTTGCT 900
 GluIleLeuAspLeuLysLeuThrIleAsnGlnMetValAspArgLeuGlnAsnPheAla 300
 CTTGCGGTGACGACATTGTCGAGAGAGGTTGGTACTTTGGGTATTTTGGGTGGACAAGCT 960
 LeuAlaValThrThrLeuSerArgGluValGlyThrLeuGlyIleLeuGlyGlyGlnAla 320
 AACGTACAGGATGTTGAAGGTGCTTGGAAACAGGTTACAGAAAATGTCAACCTAATGGCT 1020
 AsnValGlnAspValGluGlyAlaTrpLysGlnValThrGluAsnValAsnLeuMetAla 340
 ACTAATTTAACTAACCAAGTGAGATCTATTGCTACAGTTACTACTGCAGTTGCGCATGGT 1080
 ThrAsnLeuThrAsnGlnValArgSerIleAlaThrValThrThrAlaValAlaHisGly 360
 GATTTGTCGCAAAAGATTGATGGTCATCCCAAAGGAGAGATTTTACAATTGAAAAATACA 1140
 AspLeuSerGlnLysIleAspGlyHisProLysGlyGluIleLeuGlnLeuLysAsnThr 380

Fig. 2a

ATCAACAAGATGGTGGACTC GCAGTTGTTTGCATCAGAAGTC GAAAGTGGCACAA 1200
 IleAsnLysMetValAspSerLeuGlnLeuPheAlaSerGluValSerLysValAlaGln 400

GATGTTGGTATTAATGGAAAATTAGGTATTCAAGCACAAAGTTAGTGATGTTGATGGATTA 1260
 AspValGlyIleAsnGlyLysLeuGlyIleGlnAlaGlnValSerAspValAspGlyLeu 420

TGAAGGAGATTACGTCTAATGTAAATACCATGGCTTCAAATTTAACTTCGCAAGTGAGA 1320
TrpLysGluIleThrSerAsnValAsnThrMetAlaSerAsnLeuThrSerGlnValArg 440

GCTTTTGCACAGATTACTGCTGCTGCTACTGATGGGGATTTCCTAGATTTATTACTGTT 1380
 AlaPheAlaGlnIleThrAlaAlaAlaThrAspGlyAspPheThrArgPheIleThrVal 460

GAAGCACTGGGAGAGATGGATGCGTTGAAAACAAAGATTAATCAAATGGTGTTTAACTTA 1440
 GluAlaLeuGlyGluMetAspAlaLeuLysThrLysIleAsnGlnMetValPheAsnLeu 480

AGGGAATCGCTTCAAAGGAATACTGCGGCTAGAGAAGCTGCTGAGTTGGCCAATAGTGCG 1500
 ArgGluSerLeuGlnArgAsnThrAlaAlaArgGluAlaAlaGluLeuAlaAsnSerAla 500

AAATCCGAGTTTTTTAGCAAACATGTTCGCATGAGATTAGAACACCATTGAATGGGATTATT 1560
 LysSerGluPheLeuAlaAsnMet SerHisGluIleArgThrProLeuAsnGlyIleIle 520

H1

GGWATGACYCAGTTGTCRCTTGATACAGAGTTGACRCAGTACCAACGAGAGATGTTGTCTG 1620
 GlyMetThrGlnLeuSerLeuAspThrGluLeuThrGlnTyrGlnArgGluMetLeuSer 540

ATTGTGCATAACTTGGCAAATTCCTTGTTGACCATTATAGACGATATATTGGATATTTCT 1680
 IleValHisAsnLeuAlaAsnSerLeuLeuThrIleIleAspAspIleLeuAspIleSer 560

AAGATTGAGGCGAATAGAATGACGGTGAACAGATTGATTTTTTCATTAAGAGGGACAGTG 1740
 LysIleGluAlaAsnArgMetThrValGluGlnIleAspPheSerLeuArgGlyThrVal 580

TTTGGTGCATTGAAAACGTTAGCCGTCAAAGCTATTGAAAAAACCTAGACTTGACCTAT 1800
 PheGlyAlaLeuLysThrLeuAlaValLysAlaIleGluLysAsnLeuAspLeuThrTyr 600

CAATGTGATTCATCGTTTCCAGATAATCTTATTGGAGATAGTTTTAGATTACGACAAGTT 1860
 GlnCysAspSerSerPheProAspAsnLeuIleGlyAspSerPheArgLeuArgGlnVal 620

ATTCTTAACTTGGCTGGTAATGCTATTAAGTTTACTAAAGAGGGGAAAGTTAGTGTTAGT 1920
 IleLeu AsnLeuAlaGlyAsnAla IleLysPheThrLysGluGlyLysValSerValSer 640

N

GTGAAAAAGTCTGATAAAATGGTGTTAGATAGTAAGTTGTTGTTAGAGGTTTGTGTTAGC 1980
 ValLysLysSerAspLysMetValLeuAspSerLysLeuLeuLeuGluValCysValSer 660

GACACGGAATAGGTATAGAGAAAGACAAATTGGGATTGATTTTCGATACCTTCTGTCAA 2040
AspThrGlyIleGlyIleGluLysAspLysLeuGlyLeuIlePheAspThrPheCysGln 680

G1

GCTGATGGTTCTACTACAAGAAAGTTTGGTGGTACAGGTTTAGGGTTGTCAATTTCCAAA 2100
 AlaAspGlySerThrThrArgLysPhe GlyGlyThrGlyLeuGlyLeu SerIleSerLys 700

G2

CAGTTGATACATTTAATGGGTGGAGAGATATGGGTTACTTCGGAGTATGGATCCGGRTCA 2160
 GlnLeuIleHisLeuMetGlyGlyGluIleTrpValThrSerGluTyrGlySerGlySer 720

AACTTTTATTTTACGGTGTGCGTGTGCCATCTAATATTAGATATACTCGACAAACCGAA 2220
 AsnPheTyrPheThrValCysValSerProSerAsnIleArgTyrThrArgGlnThrGlu 740

CAATTGTTACCATTTAGTTCCCATTTATGTGTTATTTGTATCGACTGAGCATACTCAAGAA 2280
 GlnLeuLeuProPheSerSerHisTyrValLeuPheValSerThrGluHisThrGlnGlu 760

GAACTTGATGTGTTGAGAGATGGAATTATAGAAGTTGGATTGATACCTATAATAGTGAGA 2340
 GluLeuAspValLeuArgAspGlyIleIleGluLeuGlyLeuIleProIleIleValArg 780

Fig. 2b

AATATTGAAGATGCAACATTGACTGAGCCGGTGAAATATGATATAATTATGATTGATTTCG	2400
AsnIleGluAspAlaThrLeuThrGluProValLysTyrAspIleIleMetIleAspSer	800
ATAGAGATTGCCAAAAAGTTGAGGTTGTTATCGGAGGTTAAATATATTCCGTTGGTTTTG	2460
IleGluIleAlaLysLysLeuArgLeuLeuSerGluValLysTyrIleProLeuValLeu	820
GTCCATCATTCTATTCCACAGTTGAATATGAGAGTATGTATTGATTTGGGGATATCTTCC	2520
ValHisHisSerIleProGlnLeuAsnMetArgValCysIleAspLeuGlyIleSerSer	840
TATGCAAATACGCCATGTTTCGATCACGGACTTGGCCAGTGCGATTATACCAGCGTTGGAG	2580
TyrAlaAsnThrProCysSerIleThrAspLeuAlaSerAlaIleIleProAlaLeuGlu	860
TCGAGATCTATATCACAGAACTCAGACGAGTCGGTGAGGTACAAAATATTACTAGCAGAG	2640
SerArgSerIleSerGlnAsnSerAspGluSerValArgTyrLysIleLeuLeuAlaGlu	880
GACAACCTCGTCAATCAGAACTTGCAGTTAGGATATTAGAAAAGCAAGGGCATCTGGTG	2700
AspAsnLeuValAsnGlnLysLeuAlaValArgIleLeuGluLysGlnGlyHisLeuVal	900
GAAGTAGTTGAGAACGGACTCGAGGCGTACGAAGCGATTAAGAGGAATAAATATGATGTG	2760
GluValValGluAsnGlyLeuGluAlaTyrGluAlaIleLysArgAsnLysTyrAspVal	920
GTGTTGATGGATGTGCAAATGCCTGTAATGGGTGGGTTTGAAGCTACGGAGAAGATTCTGA	2820
ValLeuMetAspValGlnMetProValMetGlyGlyPheGluAlaThrGluLysIleArg	940
D	
CAATGGGAGAAAAAGTCTAACCCAATTGACTCGTTGACGTTTAGGACTCCAATTATTGCC	2880
GlnTrpGluLysLysSerAsnProIleAspSerLeuThrPheArgThrProIleIleAla	960
CTCACTGCACACGCCATGTTAGGTGATAGAGAAAAGTCATTGGCCAAGGGGATGGACGAT	2940
LeuThrAlaHisAlaMetLeuGlyAspArgGluLysSerLeuAlaLysGlyMetAspAsp	980
TATGTGAGTAAGCCATTGAAGCCGAAATTGTTAATGCAGACGATAAACAAGTGTATTCAT	3000
TyrValSerLysProLeuLysProLysLeuLeuMetGlnThrIleAsnLysCysIleHis	1000
H2	
AATATTAACCGATTGAAAGAATTGTCGAGAAATAGTAGGGGTAGCGATTTTGCAAAGAAG	3060
AsnIleAsnGlnLeuLysGluLeuSerArgAsnSerArgGlySerAspPheAlaLysLys	1020
ATGACCCGAAACACACCCCGGAAGCACGACCCGTCAGGGGAGTGATGAGGGGAGTGTAAG	3120
MetThrArgAsnThrProGlySerThrThrArgGlnGlySerAspGluGlySerValLys	1040
GACATGATTGGGGACACTCCCCGTCAAGGGAGTGTGGAGGGAGGGGGTACAAGTAGTAGA	3180
AspMetIleGlyAspThrProArgGlnGlySerValGluGlyGlyGlyThrSerSerArg	1060
CCAGTACAGAGAAGGTCTGCCAGGGAGGGGTCGATCACTACAATTAGTGAACAAATCGAC	3240
ProValGlnArgArgSerAlaArgGluGlySerIleThrThrIleSerGluGlnIleAsp	1080
CGTTAG	3246
Arg***	1082

Fig. 2c

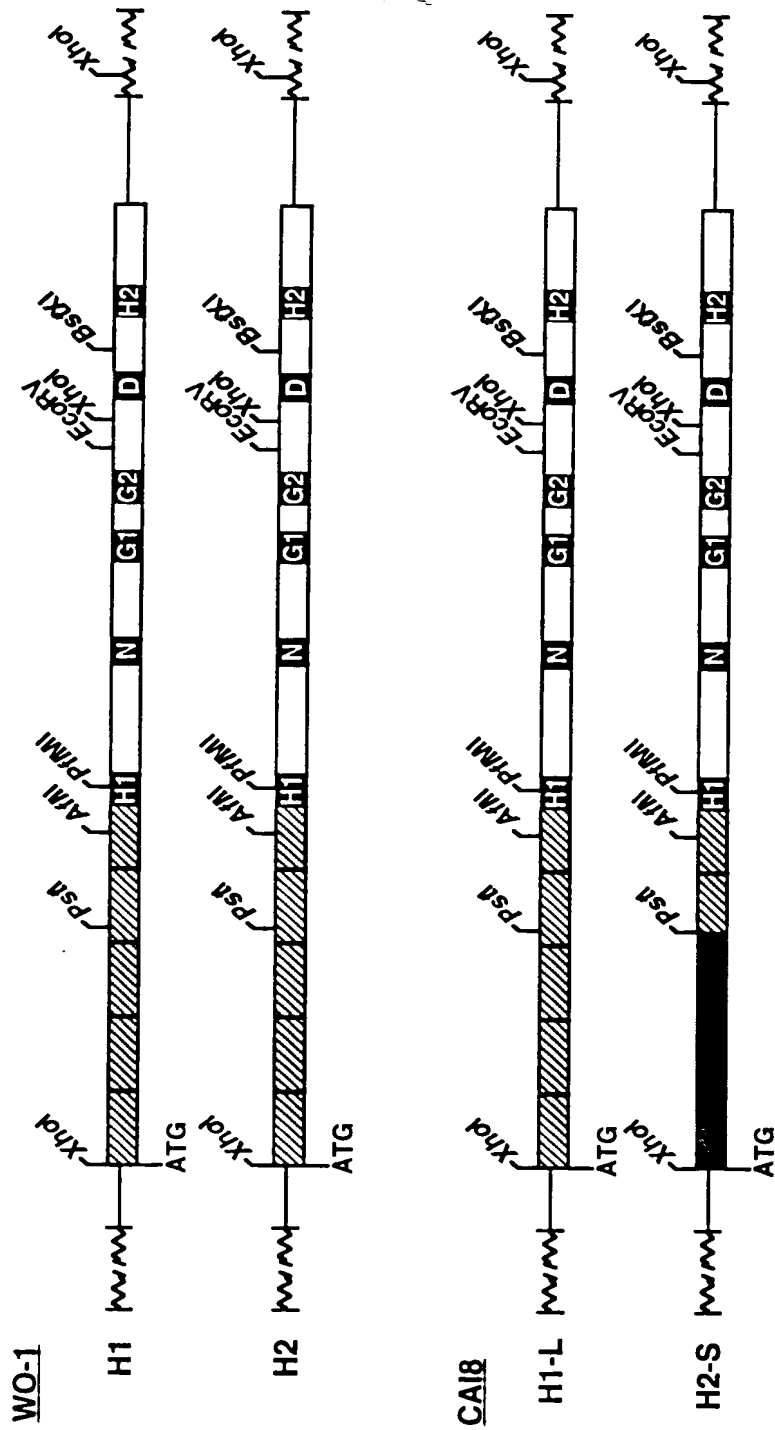


Fig. 3

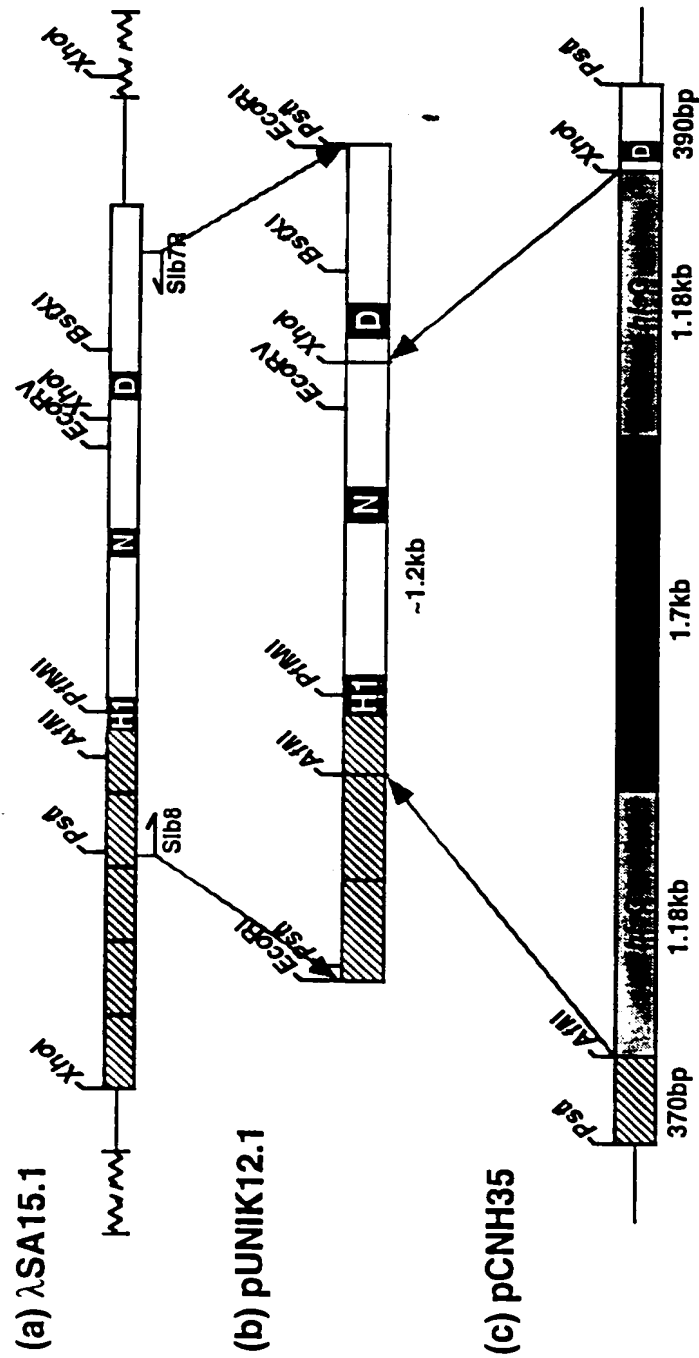


Fig. 5